## Shielded Power Inductor – XFL3012

- High current, magnetically shielded power inductors
- 3 mm x 3 mm footprint; 1.3 mm maximum height
- AEC-Q200 Grade 3 qualified (−40°C to +85°C ambient)

**Designer’s Kit C440** contains 5 of each XFL3012 and XFL3010 value

- Core material: Composite
- Environmental: RoHS compliant, halogen free
- Terminations: RoHS compliant tin-silver-copper (96.5/3/0.5) over tin over nickel over silver-platinum. Other terminations available at additional cost.
- Weight: 53 mg
- Ambient temperature: −40°C to +85°C with (40°C rise) I rms current.
- Storage temperature: Component: −55°C to +125°C.
  
**Resistance to soldering heat** Max three 40 second refloWS at +260°C, parts cooled to room temperature between cycles

**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at <30°C / 85% relative humidity)

**Failures in Time (FIT) / Mean Time Between Failures (MTBF)**

| 38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332
| Packaging: 2000/7 " reel; 7500/13 " reel Plastic tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 1.55 mm pocket depth
| PCB washing: Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf

**Part number**

<table>
<thead>
<tr>
<th>Inductance (±20% (µH))</th>
<th>DCR (Ohms)</th>
<th>SRF typ</th>
<th>Isat (A)</th>
<th>Irms (A)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>nom</td>
<td>max</td>
<td>(MHz)</td>
<td>10% drop</td>
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<tr>
<td>XFL3012-331ME_</td>
<td>0.33</td>
<td>0.023</td>
<td>0.027</td>
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</table>

1. When ordering, please specify termination and packaging codes:

| XFL3012-224MEC          |

**Termination: E** = RoHS compliant tin-silver-copper (96.5/3/0.5) over tin over nickel over silver-platinum. Special order:

**S** = non-RoHS tin-lead (63/37).

**Packaging:** C = 7" machine-ready reel. EIA-481 embossed plastic tape (2000 parts per full reel).

**B** = Less than full reel. In tape, but not machine ready. To have a leader and trailer added ($25 charge), use code letter C instead.

**D** = 13" machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (7500 parts per full reel).

2. Inductance tested at 1 MHz, 0.1 Vrms, 0 Adc.

3. DCR measured on a micro-ohmmeter.

4. SRF measured using Agilent/HP 4395A or equivalent.

5. DC current at 25°C that causes the specified inductance drop from its value without current. Click for temperature derating information.

6. Current that causes the specified temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings. Click for temperature derating information.

7. Electrical specifications at 25°C. Refer to Doc 362 “Soldering Surface Mount Components” before soldering.
Shielded Power Inductor – XFL3012

Typical L vs Frequency

![Typical L vs Frequency Graph]

Dash number

Dot indicates start lead

Recommended Land Pattern

Dimensions are in inches / mm

* For optional tin-lead and tin-silver-copper terminations, dimensions are for the mounted part.
Dimensions before mounting can be an additional 0.005 inch / 0.13 mm.

Parts manufactured prior to June 2018 may be marked differently.

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**Shielded Power Inductor – XFL3012**

**L vs Current**

- **0.33 µH**
- **0.56 µH**
- **0.68 µH**
- **1.0 µH**
- **1.5 µH**
- **2.2 µH**
- **3.3 µH**
- **4.7 µH**
- **6.8 µH**
- **22 µH**

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L vs Current

![Graph showing inductance vs current for different currents and fixed inductance values: 33 µH, 39 µH, 47 µH, 56 µH, 68 µH, 82 µH, 100 µH, 220 µH, 100 µH, 250 µH, 300 µH, 220 µH, 100 µH, 250 µH, 300 µH].

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